SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
   - Trade name
     DEAE-Dextran
   - Product no.
   - REACH registration number
   - Other means of identification

1.2. Relevant identified uses of the substance or mixture and uses advised against
   - Relevant identified uses of the substance or mixture
     Active pharmaceutical ingredient for pharmaceutical preparations and for other industrial use
   - Uses advised against
     - The full text of any mentioned and identified use categories are given in section 16

1.3. Details of the supplier of the safety data sheet
   - Company and address
     Pharmacosmos
     A/S Roervangsvej
     30 DK-4300 Holbaek Denmark
     T: +45 5948 5959
     F: +45 5948 5960
   - Contact person
     E-mail
     SDS date
     01-12-2014
   - SDS Version
     1.0

1.4. Emergency telephone number
   - +45 5948 5959
   - See section 4 “First aid measures”

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
   - This product is not classified as dangerous.
   - See full text of H/R-phrases in section 2.2.
   - DPD/DSD Classification

2.2. Label elements
   - Hazard pictogram(s)
   - Signal word
   - Hazard statement(s)
According to EC-Regulation 1907/2006 (REACH)

<table>
<thead>
<tr>
<th>Safety statement(s)</th>
<th>General</th>
<th>-</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prevention</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Response</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Storage</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Disposal</td>
<td>-</td>
</tr>
</tbody>
</table>

Identity of the substances primarily responsible for the major health hazards
DEAE-Dextran. CAS no.: 9015-73-0

2.3. Other hazards

Additional labelling
- 
Additional warnings
- 
VOC

SECTION 3: Composition/information on ingredients

3.1/3.2. Substances

NAME: DEAE-Dextran
IDENTIFICATION NOS.: CAS-no: 9015-73-0 EC-no: -
CONTENT: 95-100%
DSD CLASSIFICATION: -
CLP CLASSIFICATION: -

(*) See full text of H/R-phrases in chapter 16. Occupational exposure limits are listed in section 8, if these are available.

Other informations

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor, if in doubt about the injured person’s condition or if the symptoms continue. Never give an unconscious person water or similar.

Inhalation
Get the person into fresh air and stay with them.

Skin contact
Remove contaminated clothing and shoes at once. Skin that has come in contact with the material must be washed thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

Eye contact
Remove contact lenses. Flush eyes immediately with plenty of water (20-30°C) for at least 15 minutes and continue until irritation stops. Make sure you flush under the upper and lower eyelids. If irritation continues, contact a doctor.

Ingestion
Give the person plenty to drink and stay with the person. If the person feels unwell, contact a doctor immediately and take this safety data sheet or the label from the product with you. Do not induce vomiting unless recommended by the doctor. Hold head facing down so that no vomit runs back into the mouth and throat.

Burns
Rinse with water until the pain stops and continue for 30 minutes.

4.2. Most important symptoms and effects, both acute and delayed
No special

4.3. Indication of any immediate medical attention and special treatment needed
No special

Information to medics
Bring this safety data sheet.
According to EC-Regulation 1907/2006 (REACH)

SECTION 5: Firefighting measures

5.1. Extinguishing media
   Recommended: alcohol-resistant foam, carbonic acid, powder, water mist. Water jets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture
   If the product is exposed to high temperatures, as in the case of fire, dangerous catabolic substances are produced. These are: Carbon oxides. Fire will result in thick black smoke. Exposure to catabolic products can damage your health. Fire fighters should use proper protection gear. Closed containers, which are exposed to fire, should be cooled with water. Do not let fire-extinguishing water run into sewers and other water courses.

5.3. Advice for firefighters
   Wear self-contained breathing apparatus and protective clothing to prevent contact.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
   No specific requirements.

6.2. Environmental precautions
   No specific requirements.

6.3. Methods and material for containment and cleaning up
   Sweep up spills carefully. Use water sprays or ventilated evacuation systems to prevent dust. Cleaning should be done as far as possible using normal cleaning agents. Solvents should be avoided.

6.4. Reference to other sections
   See section on "Disposal considerations " with regard to the handling of waste. See section on "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
   See section on 'Exposure controls/personal protection' for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities
   Always store in containers of the same material as the original.

   Storage temperature
   Room temperature 5 to 30°C at a relative humidity of 20-80%

7.3. Specific end use(s)
   This product should only be used for applications described in Section 1.2

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

   OEL
   No data available

   DNEL / PNEC
   No data available.

8.2. Exposure controls
   No control is necessary if the product is used in a normal way.

   General recommendations
   Observe general occupational hygiene.

   Exposure scenarios
   If there is an appendix to this safety data sheet, the indicated exposure scenarios must be complied.

   Exposure limits
   There are no maximum exposure limits for the substances contained in this product.

   Appropriate technical measures
   Take ordinary precautions when using the product. Avoid inhalation of gas or dust.

   Hygiene measures
   Whenever you take a break in using this product and when you have finished using it, all exposed areas of the body must be washed. Always wash hands, forearms and face.
According to EC-Regulation 1907/2006 (REACH)

**Measures to avoid environmental exposure**
No specific requirements.

**Individual protection measures, such as personal protective equipment**

**Generally**
Only CE-marked personal protection equipment should be used. Use only CE marked protective equipment.

**Respiratory Equipment**
If the ventilation at the workplace is not sufficient, use a half or whole mask with an appropriate filter or an air-supplied respiratory protector. The choice depends on the concrete work situation and how long you will be using the product.

**Skin protection**
No specific requirements.

**Hand protection**
No specific requirements.

**Eye protection**
Use face shield. Use safety glasses with a side shield as an alternative.

---

**SECTION 9: Physical and chemical properties**

<table>
<thead>
<tr>
<th>9.1. Information on basic physical and chemical properties</th>
<th>Form</th>
<th>Colour</th>
<th>Odour</th>
<th>pH</th>
<th>Viscosity</th>
<th>Density (g/cm³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powder</td>
<td>White</td>
<td>None</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Phase changes**

- Melting point (°C)
- Boiling point (°C)
- Vapour pressure (mm Hg)

**Data on fire and explosion hazards**

- Flashpoint (°C)
- Ignition (°C)
- Self ignition (°C)
- Explosion limits (Vol %)
- Oxidizing properties

**Solubility**

- Solubility in water: Soluble
- n-octanol/water coefficient: Additional information

**9.2. Other information**

- Solubility in fat: N/A

---

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**
No data available

**10.2. Chemical stability**
The product is stable under the conditions, noted in the section on “Handling and storage”.

**10.3. Possibility of hazardous reactions**
No special

**10.4. Conditions to avoid**
No special

**10.5. Incompatible materials**
Strong acids, strong bases, strong oxidizing agents, and strong reductants agents.

**10.6. Hazardous decomposition products**
The product is not degraded when used as specified in section 1.

---

**SECTION 11: Toxicological information**

DEAE-Dextran
According to EC-Regulation 1907/2006 (REACH)

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th></th>
<th>Substance</th>
<th>Species</th>
<th>Test</th>
<th>Route of exposure</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>No data available.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>No data available.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>No data available.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No data available.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carcinogenicity</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>No data available.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>No data available.</td>
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<tr>
<td>STOT-repeated exposure</td>
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<tr>
<td>Aspiration hazard</td>
<td>No data available.</td>
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<td></td>
</tr>
<tr>
<td>Long term effects</td>
<td>No special</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th></th>
<th>Substance</th>
<th>Species</th>
<th>Test</th>
<th>Test duration</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th></th>
<th>Substance</th>
<th>Biodegradability</th>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th></th>
<th>Substance</th>
<th>Potential bioaccumulation</th>
<th>LogPow</th>
<th>BFC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

<table>
<thead>
<tr>
<th></th>
<th>No data available</th>
</tr>
</thead>
</table>

12.5. Results of PBT and vPvB assessment

<table>
<thead>
<tr>
<th></th>
<th>No data available</th>
</tr>
</thead>
</table>

12.6. Other adverse effects

<table>
<thead>
<tr>
<th></th>
<th>No special</th>
</tr>
</thead>
</table>

SECTION 13: Disposal considerations

13.1. Waste treatment methods

<table>
<thead>
<tr>
<th></th>
<th>This product is not covered by the regulations on dangerous waste.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste</td>
<td>EWC code</td>
</tr>
<tr>
<td>Specific labelling</td>
<td></td>
</tr>
<tr>
<td>Contaminated packing</td>
<td>No specific requirements.</td>
</tr>
</tbody>
</table>

SECTION 14: Transport information

Not listed as dangerous goods under ADR and IMDG regulations.

14.1 – 14.4
According to EC-Regulation 1907/2006 (REACH)

<table>
<thead>
<tr>
<th>ADR/RID</th>
<th>14.1. UN number</th>
<th>14.2. UN proper shipping name</th>
<th>14.3. Transport hazard class(es)</th>
<th>14.4. Packing group</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMDG</td>
<td>UN-no.</td>
<td>Proper Shipping Name</td>
<td>Class</td>
<td>PG</td>
<td></td>
</tr>
<tr>
<td>IATA/ICAO</td>
<td>UN-no.</td>
<td>Proper Shipping Name</td>
<td>Class</td>
<td>PG</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>EmS</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MP**</td>
<td></td>
</tr>
</tbody>
</table>

14.5. Environmental hazards

- 

14.6. Special precautions for user

- 

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No data available

(*) Packing group

(**) Marine pollutant

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Restrictions for application

- 

Demands for specific education

- 

Additional information

- 

Sources

EC regulation 1907/2006 (REACH)
Directive 2000/532/EC
EC Regulation 1272/2008 (CLP)

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H/R-phrases as mentioned in section 3

- 

The full text of identified uses as mentioned in section 1

- 

Other symbols mentioned in section 2

- 

Other

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

A change (in proportion to the last essential change (first cipher in SDS version)) is marked with a blue triangle.

The safety data sheet is validated by clan/chymeia

Date of last essential change (First cipher in SDS version)
28-11-2014

Date of last minor change (Last cipher in SDS version)
01-12-2014